A collaborative approach using a subepidermal moisture device along with nursing skin assessment to determine efficacy of current practice in preventing hospital-acquired pressure injuries a comprehensive cancer center.

Michelle H. Johann, MSN-Ed, RN, PHN, CPAN, Marie Malicki, RN, MSN, RN, PHN, CNOR, CSSM, NEA-BC, Regina Buchanan, MSN-ED, RN, NEA-BC, Kerry Caldwell, MBA, RN, CNOR, Jesee Castro, BSN, RN, Ann Whaley, NP, WOCN, Kelly Fong, BSN, RN, Nikkey Nesmith, BSN, RN

TOPIC

A concern regarding variation in nursing assessment skills led to an evaluation of using a skin moisture measuring device to validate nurse skin assessment findings

OBJECTIVES

An evaluation of collaborative skin assessment and the use of a moisture measuring device concluded minimum value added to an already robust clinical nurse assessment and intervention process that identified patients with a high risk of pressure related skin injuries five days prior to their occurrence.

PROCESS

A leadership team implemented a practice change to include using a skin moisture scanner during visual skin assessment. The objective of this additional instrument was to highlight innovative technology for the advancement of nursing assessment, and increasing patient satisfaction and overall patient outcomes.





The data collection tools included a scanner data sheet, a checklist and a nursing script for interacting with patients. A re-evaluation of processes and bi-weekly data monitoring via meetings were done to ensure a standardized approach in consistent patient care



Script: Hello my name is and over the next couple of months our department will be utilizing a scanner to check your heels and sacrum for any skin issues. We will continue to scan your heels and sacrum throughout your hospitalization as well as provide preventative measures to main your healthy skin.

PROCESS

The utilization of a standardized nursing skin assessment process validated by the hospital's WOCN included: visual skin assessment, Braden Scale Pressure Injury Risk assessment, and a moisture measuring device algorithm

upon arrival

oon arrival

n arrival and each sh

on arrival

PROCESS

				and the second		CHECK	IIST.
A	REDNESS	DELTA	Vasopressors	Intervention/s added if delta eq greater than 0.6	ual or	CITECI	
ım				Standard 🖬 Wound Consult			SCAN patient in PREC
teel							
eel				Advanced 🗆			
m		A Sold State		Standard 🛛 Wound Consult			
leel		STATES OF		N			
eel		1.00	DYDN	Advanced 🗆	i i		
m				Standard Wound Consult			SCAN patient in OR u
teel				s seeling all and swears sweithers	12 B		
eel				N Advanced 🗖	<u>(</u>	and the second s	
m		1002000		Standard 🗅 Wound Consult			
teel		and the second	DYDN	N			SCAN natient in PACL
eel	DYDN			Advanced 🗖			SCAR patient in the
m	OÝÓN			Standard D Wound Consult			
teel				N			
eel				Advanced 🗖			SCAN patient in ICIL
m				Standard D Wound Consult			SCAN patient in ico c
leel				N.			
eel		A BRACE		Advanced 🗖			until discharge
C III	SOUL & Ci	tyofHop	be.				

PATIENT SELECTION

Scanning of patient's heels and sacrum using a moisture measuring device began in the preoperative setting, moving into the operating room suite, then post anesthesia care unit, with a final disposition to intensive care unit. This serial skin assessment identified patients' heightened risk for developing pressure injury, supporting pressure injury prevention and care algorithm protocol to be initiated.

PATIENT SELECTION

- 30 patients scanned
- Patient Selection Criteria:
 - OR scheduled case duration over 6 hours
 - OR cases in the supine position only
 - No Vasopressor in the ICU
- Patients Scanned throughout the perioperative and post-op process
 - (ICU)
- Scanning Process:
 - Heels and sacrum scanned using a moisture measuring device

• Preoperative bay, Operating Room, Post Anesthesia Care Unit (PACU), Intensive Care Unit

OUTCOME

Incidence of pressure injury with visual skin assessment was measured against the number of pressure injury occurrences during the two-month trial, results suggested current nursing interventions promoting mobility, activity, sensory, friction and shear interventions along with moisture management and nutritional consult provided an optimal approach in reducing pressure

OUTCOME

Perioperative (Pre-operative, Operating Room and Post Anesthesia Care Unit):

Average procedure duration in minutes = 440 minutes

Patients were positioned supine on foam head rest, pillows under knees and foam pad under their ankles during surgery. (*Note: 3 patients were excluded from the trial because they were not supine during surgery.) Sacral foam dressing were also applied to all patients in pre-op. ICU:

Average length of stay = 1.54 days All patients received standard PI prevention interventions. One patient was given vasopressors.



OUTCOME

There were missed opportunities in scanning patients for sub-epidermal moisture during their perioperative and intensive care unit stays. Data derived from the sub-epidermal moisture scans did not require patients to receive advanced PI management. Standard PI interventions were implemented on all patients and none developed PI during their perioperative and intensive care stays.

									ICU																						
ICU 12-hour assessment ICU 12-hour assessment 2					ment 2	ICU 12-hour assessment 3				ICU 12-hour assessment 4			ICU 12-hour assessment 5			ICU 12-hour assessment 6							Scanr	ed Pre Mis	ssure F sed	oints					
acru m	Right Heel	Left Heel	Brade n Score	Sacru m	Right Heel	Left Heel	Brade n Score	Sacru m	Right Heel	Left Heel	Brade n Score	Sacru m	Right Heel	Left Heel	Brade n Score	Sacru m	Right Heel	Left Heel	Brade n Score	Sacru m	Right Heel	Left Heel	Brade n Score	ICU Interver ICU Interver le length ons of stag Yes=1 re (days) No=0	Standard Interventi ons Yes=1, No=0	¥asopre ssors Yes=1, No=0	Preo p	OR	PAC U	ICU	Develo ped Pl Yes=1, No=0
11	0.5	0.9	17	13	1	0.9	15	19	0.4	0.5	15	18	0.7	0.3	15	18	0.6	0.9	15	19	0.3	0.5	17	3.5	1	0	Û	3	0	0	0
8.0	0.8	0.5	15	0.2	13	1,4	15		÷.			÷.						÷.			÷			15	1	0	0	3	0	15	0
8.0	1	0.5	14	12	0.7	0.8	14		0.7	13	14	э.												2	1	1	0	0	3	13	0
0.5	0.6	0.7	14	0.6	0.9	0.3	15	0.9	0.4	0.5	14	0.6	0.4	0.2	14	0.7	0.5	0.1	13	0.7	0.4	0.2	15	3.5	1	0	0	0	3	0	0
0.1	1	1	16																•					1	1	0	0	0	0	20	0
								10											•					0.5	1	0	0	3	1	24	0
			•											э.					•					0.5	1	0	1	3	1	24	0
	0.6	17					×.														•			1	1	0	0	Q	1	24	0
0.7	1	0.1	17			,											•							1	1	0	3	3	3	20	0
8.0	11	13	17			•													•					1	1	0	3	3	3	20	0
17	12	1	13	16	0.5	0.1	15	11	0.6	0.4	15													2	1	0	3	3	3	13	0
18	1	0.6	15	0.8	0.4	0.2	8	0.6	0.1	0.2	20													2	1	0	3	3	3	12	0
																				•	,		•	0.5	1	0	3	3	3	24	0
																							Avera ge ICU stags in	1.54							